

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (previously presented): A surface-modified base matrix, comprising a porous polymeric base matrix onto which branched hydrophilic polyhydroxy-functional polymers have been covalently attached, wherein the polyhydroxy-functional polymers include hyperbranched polymers having a degree of branching (DB) of at least 0.2 and further wherein each polymer has been tethered to the base matrix at two or more points.

Claim 2 (previously presented): The matrix of claim 1, wherein the polymeric base matrix present a hydrophilic polyhydroxy-functional pore surface.

Claim 3 (previously presented): The matrix of claim 1, wherein the polymeric base matrix includes a cross-linked carbohydrate material.

Claim 4 (previously presented): The matrix of claim 1, wherein the polymeric base matrix is comprised of one or more synthetic polymers.

Claim 5 (previously presented): The matrix of claim 1, wherein the degree of branching of the polyhydroxy-functional polymers is at least about 0.4.

Claim 6 (previously presented): The matrix of claim 1, wherein the hyperbranched hydrophilic polymer is a copolymer comprising a polyhydroxy-functional monomer cross-linked with an epoxide.

Claim 7 (previously presented): The matrix of claim 6, wherein the epoxide is epichlorohydrin.

Claim 8 (previously presented): The matrix of claim 1, wherein the polyhydroxy-functional monomer is a polyol.

Claim 9 (previously presented): The matrix of claim 8, wherein the polyol is a sugar or a sugar alcohol.

Claim 10 (previously presented): The matrix of claim 9, wherein the polyhydroxy-functional monomer is selected from the group consisting of sucrose, glucose, sorbitol, mannitol and xylitol.

Claim 11 (previously presented): The matrix of claim 10, wherein the polyhydroxy-functional monomer is sucrose.

Claim 12 (previously presented): The matrix of claim 1, which has been derivatised into a chromatographic matrix by attachment of functional groups to one or more of the hydroxy groups of the polymer.

Claim 13 (previously presented): The matrix of claim 12, which is an ion-exchanger, and wherein said functional groups are charged groups adapted to binding substances having an opposite charge.

Claim 14 (previously presented): The matrix of claim 13, which has been derivatised into a cation-exchanger by attachment of sulfopropyl groups to one or more of the hydroxy groups of the polymer.

Claim 15 (previously presented): The matrix of claim 13, which has been derivatised into a anion-exchanger by attachment of quaternary amino groups to one or more of the hydroxy groups of the polymer.

Claim 16 (previously presented): The matrix of claim 12, wherein said functional groups are selected from the group consisting of affinity groups, hydrophobic groups and metal chelating groups.

Claim 17 (cancelled)

Claim 18 (withdrawn): A method of surface-modification of a porous base matrix, comprising the steps of:

- (a) providing a porous polymeric base matrix that includes functional hydroxy groups;
- (b) activating the functional hydroxy groups on the base matrix by nucleophilic substitution;
- (c) providing a hydrophilic branched hydroxy-functional polymer; and
- (d) contacting the activated base matrix with said polymer under conditions allowing covalent coupling of the hydrophilic polymer to the base matrix,

wherein the polyhydroxy-functional polymer is a hyperbranched polymer that presents a degree of branching (DB) of at least about 0.2.

Claim 19 (withdrawn): The method of claim 18, wherein the porous base matrix provided in step (a) is a cross-linked carbohydrate.

Claim 20 (withdrawn): The method of claim 18, wherein the porosity of the base matrix provided in step (a) is at least about 90%.

Claim 21 (withdrawn): The method of claim 18, wherein an epoxide reagent is added in step (b).

Claim 22 (withdrawn): The method of claim 18, wherein the hydrophilic hyperbranched hydroxyfunctional polymer is provided by polymerisation of a polyhydroxy-functional monomer with epichlorohydrin.

Claim 23 (withdrawn): The method of claim 18, wherein the polyhydroxy-functional monomer is a polyol, such as a sugar or a sugar alcohol.

Claim 24 (withdrawn): The method of claim 23, wherein the polyhydroxy-functional monomer is selected from the group consisting of sucrose, glucose, sorbitol, mannitol and xylitol.

Claim 25 (withdrawn): The method of claim 18, wherein step (d) is performed under alkaline conditions.

Claim 26 (withdrawn): The method of claim 18, wherein the degree of branching of the hyperbranched hydrophilic polymer is at least about 0.4.

Claim 27 (withdrawn): A method of producing an ion-exchange matrix, which method comprises to modify the surface of the porous polymeric base matrix of claim 18 and an additional step of derivatisation of one or more of the hydroxy groups present on the modified surface with functional groups.

Claim 28 (withdrawn): The method of claim 27, wherein said functional groups are selected from the group consisting of ion exchange groups, affinity groups, hydrophobic groups and metal chelating groups.

Claim 29 (previously presented): The use of the matrix of claim 1 in chromatography.